DOCUMENT RESUME

ED 239 222 CS 007 455

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TITLE The Effects of Intensive Vocabulary Instruction on a Specific Writing Task. A Plan B Paper.
PUB DATE Aug 83
NOTE 117p.; M.A. Thesis, University of Minnesota.
PUB TYPE Reports - Research/Technical (143) -- Dissertations/Theses - Master Theses (042)

EDRS PRICE MF01/PC05 Plus Postage.
DESCRIPTORS Age Differences; Grade 4; Grade 6; Intermediate Grades; *Prewriting; Student Attitudes; Teaching Methods; Units of Study; *Vocabulary Development; Writing Exercises; *Writing Improvement; *Writing Research

ABSTRACT

A study investigated the effects of preteaching vocabulary on students' performance of a writing task targeted to the use of those words. Subjects were 50 fourth grade and 55 sixth grade students. Materials included a pretest narrative writing assignment, a 10-word vocabulary pretest and posttest, a vocabulary instructional booklet with teacher's guide, a posttest narrative writing assignment, and an attitude inventory. The experimental treatment consisted of activities designed to teach a set of 10 words related to the topic of the posttest writing assignment. The results of the writing assignment indicated that the fourth grade students receiving the vocabulary instruction used an average of 80% of the new words in their narratives, while the sixth grade students receiving instruction used an average of only about 40% of the words. However, the fourth grade students did not always use the words correctly, whereas the sixth graders showed a more tentative but more correct use of the words. On the vocabulary tests, both the fourth and the sixth grade experimental students learned the words taught. The results of the attitude inventory indicated that the instructional unit was well received. The majority of students both enjoyed the unit's activities and attempted to use the new vocabulary in their subsequent writing. The overall quality of the experimental students' writing also improved. (Testing materials, an outline of the instructional unit, and the scoring scale are appended.) (HTH)

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THE EFFECTS OF INTENSIVE VOCABULARY INSTRUCTION ON A SPECIFIC WRITING TASK

A Plan B Paper

Submitted to the Faculty of the Graduate
School of the University of Minnesota

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY

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By

Ann Hill Duin

In Partial Fulfillment of the Requirements
For the Degree of Master of Arts

August, 1983

ACKNOWLEDGEMENTS

A special thank you goes to these people who made major contributions to this study:

to my Advisor, Dr. Michael F. Graves, whose direction and interest made this a rewarding experience,

to Dr. Vicky Walsh, whose patience and skill taught me how to use the University's microcomputer prose system,

to Ms. Debra Witte, Ms. Janet Peterson, Mr. Craig Miller, and Mr. Willis Welp, who made the classroom experiments possible,

to my sister, Faye H. Thompson, for observing the preliminary study,

to my family, for their prayers and love, and

to my husband, Doug, for his constant support.

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CHAPTER I

INTRODUCTION

Words are the raw materials of thinking, speaking, hearing, reading, and writing. Words organize a person's world of experiences to make it conceptually manageable. These words are recognized by means of our internal lexicon (Oldfield, 1966; Treisman, 1961), which contains all of the information we acquire about words as we experience language. As we see, hear, read or speak words, our "lexical dictionary" is being accessed for the right word or concept for that particular experience.

Our internal lexicon is gradually built from infancy onward. Our set of semantic features for each lexical entry expands and changes as we develop fuller concepts for each word. These concepts form a particular schema for a word that is retrieved when we encounter the word. Furthermore, it should be noted that words and their associated schemata are not isolated entities, but cohere in a system exemplifying varying relationships.

An instructor's task in building vocabulary is to assist students both in incorporating new words into their existing lexicon and in assimilating new semantic features for words already known. Words not in a student's vocabulary must be defined and analyzed so that the student can associate the new words with existing vocabulary and develop networks indicating their relationships to his or her existing knowledge and prior experiences. The concepts for words currently in a student's vocabulary must be broadened to include deeper and more precise semantic features so that the sensory, emotional, and descriptive

power of words can be fully appreciated. The instructor can directly teach the student to discriminate the "subtle shades of meaning conveyed by words that denote the same object, action, or feeling in the real world" (Pearson & Johnson, 1978, p. 69).

Most vocabulary instruction takes place in conjunction with reading. One sees little vocabulary instruction used in conjunction with writing. This is surprising, since recent research has revealed a variety of relationships between reading and writing and between vocabulary and writing. A characteristic distinguishing good and average writers is that good writers do significantly more voluntary reading than average writers (Barbig, 1968; LaChampagne, 1968). The reading comprehension of good writers is significantly better than that of average writers (Maloney, 1967). The best readers produce the most complex sentence structures in their writing (Zeman, 1969). And, reading programs that include writing components are more successful than those that do not (Bond & Dykstra, 1967; Chall, 1967).

It would seem from this evidence that vocabulary, though traditionally developed through reading, could also be developed through writing. Shanahan (1980) is one author who has suggested this. He provides one example of how vocabulary might be developed through writing: "Writing experiences could provide an important opportunity for students to experiment with new words, to test their understanding of words in a communicative setting, and to make their usage of these words more precise" (p. 362).

This study was designed to provide students with full concepts for new words and to thereby develop the students' precision in using the words. More specifically, this study

investigated the effect of preteaching a set of words that lend themselves to writing about a particular topic on students' performance on a writing task targeted to the use of the words. The questions I asked were (a) Will the vocabulary learned in the instructional unit be readily accessed by the student as he or she writes on an assignment targeted to the use of the new words, and (b) Does such preteaching of vocabulary improve the quality of the writing?

The remainder of this paper is divided into four chapters. Chapter II provides a review of the literature pertaining to vocabulary knowledge and reading and writing. Chapter III describes the subjects, the materials, the experimental and control treatments, the procedures followed in administering the treatments, the procedures followed for scoring each dependent measure, and the design and analysis used for the study. Chapter IV presents the results of the study. Finally, Chapter V gives an overview of the results, speculates on the cognitive effects which made the instruction effective, speculates on the attributes of the instruction which made it effective, considers implications for future research, and concludes with a brief statement.

CHAPTER II

REVIEW OF THE LITERATURE

As noted in the previous chapter, although recent research reveals definite relationships between reading and writing and between vocabulary and writing, empirical results demonstrating the efficacy of vocabulary instruction in conjunction with writing are lacking. This chapter will focus on empirical studies which suggest that preteaching vocabulary effects the quality of students' writing. It includes six sections. The first section briefly mentions some of the research and theory about the relationship between reading and writing and is intended to emphasize the myriad of directions this research and theory have taken. The second section presents research indicating that preteaching vocabulary improves reading comprehension. The third section describes two studies which show the effect of the vocabulary used in writing on judgements of the writing. The fourth section examines several prewriting approaches and describes two studies which indicate the positive effects of prewriting. The fifth section presents two studies which investigated the effect of teaching vocabulary on the quality of students' writing. The chapter concludes with a brief description of the experiment.

The Range of Research and Theory on Reading and Writing

Over the last decade, research and theory have emphasized the plethora of relationships between reading and writing. This research and theory have shown how writing instruction fosters word recognition abilities (Aukerman, 1971; Bush & Huebner, 1970;

Stauffer, 1973; Wilson & Hall, 1972), improves reading comprehension (Combs, 1977; Finder, 1971; Ribovitch, 1977), increases students' interest in reading (Brogan & Fox, 1961; Roeder & Lee, 1973), and assists students in understanding complex syntactic representations and integrating word analysis skills (Smith, 1982).

As a result of this research and theory, instructional strategies which teach reading and writing skills together have been studied (Wilson, 1981). Sentence-combining, a form of writing instruction, has been shown to be useful in developing both composition skills and reading comprehension (Hughes, 1975; Klein, 1980; Stotsky, 1975). An instructional writing sequence in which students move from being constructors of content to interpreters of it has been used as a way of introducing students to text structures in reading (Hennings, 1982).

A particular interest in this area has been that of studying the importance of acquiring meaning in and from reading and writing (Elkind, 1976; Ribovitch, 1977). Students' behaviors at stages of the reading and writing processes are shown to be rooted in their intentions to represent meaning to themselves and others (Birnbaum, 1982). Theorists argue that our comprehension of texts, whether written or oral, is an act of composition, that understanding is composing. Studying the connections between reading and writing shows that students give similar explanations about acquiring meaning whether they are reading or writing (Petrosky, 1982). The study of acquiring meaning through the processes of reading and writing has led to the study of the relationships between cognitive processes involved in both

reading and writing (Flower & Hayes, 1977, 1980; Kintsch & van Dijk, 1978). Even reading and writing miscues have been found to be highly correlated (Ney, 1975).

As noted, this section provides a broad overview of the directions research and theory on reading and writing has taken in the last decade; the next section discusses several studies concerned with vocabulary and reading comprehension in detail.

The Effects of Short and Long-Term Vocabulary Teaching on Reading Comprehension

Several studies have indicated that preteaching vocabulary improves comprehension. In one such study, Kameenui, Carnine, and Freschi (1982) investigated four comprehension issues in two experiments. The following two issues will be discussed here: (a) whether learning the meanings of the difficult words in a text facilitates text comprehension, and (b) whether teaching word meanings as students are actually reading and come across difficult words is more effective than having students refer before or after reading to a brief definition and a sentence illustrating the meaning of the word. Sixty fourth, fifth, and sixth grade students took part in the first experiment, and 60 fifth and sixth grade students took part in the second experiment. The students were randomly assigned to one of five treatment groups. In all treatments, students were asked to read a passage. The passage used in treatment one contained easy vocabulary, and the passage used in treatment two contained difficult vocabulary. In the third treatment, two sentences were added to the passage that gave the meaning of some of the difficult vocabulary words. This allowed the students to draw

inferences about the main idea of the passage. The fourth and fifth treatments were two context methods. In treatment four, a synonym or brief definition was given for each low frequency word, and each word also appeared in a sentence. In treatment five, students were required to stop after reading a sentence that contained a difficult word, state the meaning for the word, and then answer an experimenter's question that required them to know the meaning of the word. After reading the passages, all students retoid the stories and answered both literal and inferential questions about them.

Results on the recall protocols showed treatments four and five to be significantly more effective than treatment two. The comprehension test showed no significant differences among the treatments on the literal questions; however, differences on the inferential questions were significant. Treatment one (easy vocabulary) was superior to treatment two (difficult vocabulary) ($p < .001$); treatment three (difficult vocabulary plus redundant information) was superior to treatment two (difficult vocabulary alone) ($p < .05$); and treatments four and five (difficult vocabulary plus training) were superior to treatment two (difficult vocabulary alone) ($p < .001$).

Because of the contrived nature of the passage used in the first experient, Kameenui et al. replicated the experiment. Another passage with difficult words was used; otherwise, the treatments remained the same. The results of both the recall protocol analysis and comprehension test paralleled those of experiment one. An additional planned comparison between treatments four and five resulted in a significant difference

favoring treatment five for recall scores.

Kameenui et al. demonstrated that short-term vocabulary instruction does have an effect on text comprehension. However, although the passage used in the second experiment was somewhat better than the passage used in the first experiment, these passages were still contrived by the experimenters. It would seem profitable to study the effects of vocabulary training with a passage regularly used in a content area. The next study did this.

Graves and Bender (1980) investigated the effect of preteaching potentially difficult vocabulary from a content area selection immediately before students read the selection. The procedures investigated were intended to be used by teachers whose primary interest is teaching content and were designed for use with selections the length of short articles or stories. As did Kameenui et al., Graves and Bender sought to show that preteaching vocabulary assisted students in both learning the vocabulary and in better comprehending the selection from which the words were taken. Ninety-six ninth grade students and 96 eleventh grade students were divided into three equal size ability groups. Within each group and ability level, half of the students were randomly assigned to the experimental group and half to the control group. Ten difficult words known by fewer than 50% of the students were chosen from each of two 1,600 word biographical sketches. Each set of ten words was pretaught to students in the experimental group. The students listened to an eight minute taped vocabulary lesson on the ten words and followed along on a work sheet. The lesson consisted of a

narrator's pronouncing each word and using it in a 20-50 word paragraph. The tape paused while the students marked one of four possible synonyms for the word on the answer sheet, and the tape followed with the correct answer. After the taped lesson, the experimental group read the selection and took the comprehension test. The control group performed the same task without previously having the taped lesson.

The comprehension tests consisted of ten multiple-choice questions for each selection. The major finding was that the students who were pretaught vocabulary scored significantly higher on the comprehension test than students who were not pretaught vocabulary. The vocabulary tests consisted of 10 multiple-choice, synonym matching items for each selection. A secondary finding was that the students taught the vocabulary did learn the words taught.

Like Kameenui et al.'s study, this study indicated that short-term vocabulary instruction has a positive effect on text comprehension. This study extended the findings of Kameenui et al. by examining effects with high school students and by using passages that were not contrived by the experimenters. Since this study also investigated only short-term vocabulary instruction, it would seem reasonable to study the effects of long-term vocabulary instruction. The next series of studies investigated the effects of long-term vocabulary instruction.

Beck and her associates planned and twice documented a five-month vocabulary program designed to foster word consciousness and to improve students' general comprehension ability by teaching 104 words intensively. The rationale and

design of the program is described by Beck, McCaslin, and McKeown (1980). Here, they distinguish between the established, acquainted, and unknown levels of word knowledge:

> A word at the established level is one whose meaning is easily and rapidly (perhaps automatically) accessed. A word at the acquainted level is one whose meaning is recognized, but only after deliberate attention has been focused on it. A word at the unknown level is one whose meaning has not been established in semantic memory. (p. 12)

It seems obvious that the best situation for comprehension of a text would occur when nearly all of the words in a text are in the established repertoire of the students reading the text. Beck et al. addressed the question of how many encounters with a word are needed before the meaning of the word is established. In order to do so, they developed two different frequency conditions within the instruction. In the first frequency condition, the some condition, eight to ten words were presented in half hour sessions for five days. In the second frequency condition, the many condition, a subset of words from the some condition were maintained over time by being presented in conjunction with new words and in review cycles.

Beck, Perfetti, and McKeown (1982) explored whether the children's differential exposure to the new target words would produce differences in the speed with which students recognized and assigned meanings to words. Twenty-seven students from an inner-city Pittsburgh school were taught the 104 words over a

five month period, and their performance was compared with a control group. The vocabulary instruction involved that of presenting sets of words grouped into 12 semantic catagories described by such headings as people, eyes, moods, and eating. A variety of instructional strategies were used in five-day cycles presented over five months, with approximately 30 minutes of instruction per day. The target words were taught by concept-learning techniques, that is, by the presentation of examples of a new concept contrasted with non-examples of the concept and by classification exercises. Exercises were also completed in which the students learned to recognize relationships among the new words. A multiple-choice test was given as a measure of word knowledge, a semantic decision task measured speed of lexical access, and text comprehension was measured by a probed recall of stories written around the words taught.

The results of the study showed that the children who received the vocabulary instruction scored significantly better on the test of word knowledge and performed significantly faster and more accurately or the semantic decision task. However, on the comprehension task, only the many words' story indicated a difference between the groups, and this was only a marginally significant difference in favor of the instructed (27%) over the uninstructed (19%) students. One of Beck et al.'s conclusions is that, "Acquiring word meanings to a high level is not an easy task, even with intensive instruction" (p. 32).

McKeown, Beck, Omanson, and Perfetti (1983) identify three problems in the methodology of the above study: (a) The some

words' story had a more complex plot structure than the others, (b) the story plots were "over-contrived," and (c) the assessment measure was a probed recall which did not allow students to generate their own recall structure. The materials and procedures used in this later study were the same as those used in the previous study. The methodological problems were dealt with by revising the stories and replacing the probed recall task with a free recall task. A comprehension measure of 25 multiple-choice questions was also added. The results of this replication also strongly supported the conclusion of the first study that intensive vocabulary instruction designed to promote deep and fluent word knowledge does enhance text comprehension. The results of this study showed the effect on comprehension of stories containing target words in three ways: (a) by an increased amount of recall produced by the experimental group, (b) by the improved quality of the experimental group's recall, and (c) by the experimental group's greater proportion of correct responses to multiple-choice questions about the stories. The study also replicated the gains in accuracy of word knowledge and fluency of lexical access that were found in the first study.

The studies of Beck and her colleagues show that long-term vocabulary instruction does effect text comprehension. These studies also indicate that vocabulary instuction must go beyond establishing accurate responses to words. Instruction in these studies was designed to promote deep and fluent knowledge of words. Opportunities were provided for children to practice and apply the words in various contexts, and to consider the words in relationship to each other and in relationship to known words and

concepts. Children were also asked to justify and explain their reasons for the answers they gave during the instructional activities. This enhanced activity with the words resulted in long-term recognition and use of the words.

If vocabulary instruction is to influence writing, it seems very likely that this instruction must go beyond establishing accurate responses to words by providing rich semantic environments for students' learning and using the new vocabulary words.

It has been shown that when more difficult vocabulary is correctly used in writing, this positively influences judgements of the writing. The next section discusses studies concerned with the effect of the vocabulary used on judgements of writing.

The Effects of Writing Vocabulary on Judgements of the Writing

Two studies have indicated that the vocabulary used in writing effects judgements of the quality of the writing. In one study, Neilsen and Piche (1981) investigated whether the use of complex headed nominal structures (syntactic complexity) results in a higher qualitative rating of a passage than the use of simple headed nominal structures, and whether the use of more mature vocabulary results in a higher qualitative rating than the use of less mature vocabulary. Eighty in-service and pre-service high school English teachers served as raters. Four versions of a passage were constructed to combine the variables as follows: complex headed nominal structures with mature vocabulary, complex headed nominal structures with simple vocabulary, simple headed nominal structures with simple vocabulary, and simple headed

nominal strucures with mature vocabulary. Based on an analysis of words per t-unit, words per clause, and clauses per t-unit, the two versions containing complex headed nominal structures were slightly above Hunt's (1965) ratio for twelfth grade writing norms, and the two versions containing simple headed nominal structures were slightly below Hunt's ratio for twelfth grade writing norms.

Two dependent measures served to evaluate the compositions. The first measure was comprised of eight semantic differential scales, each containing seven bipolar adjectives. The second measure was a holistic rating scale of quality in which raters rated the passage from 1 (low) to 7 (high). The results did not show a relationship between syntactic complexity and quality of writing. However, the two versions of the passages having mature vocabulary were evaluated significantly more favorable on both scales. Here, vocabulary choice is clearly shown to effect judgements of the quality of writing.

Grobe (1981) also explored specific predictors of quality ratings of writing. Unlike Neilsen and Piche, Grobe used a random sample of essays consisting of 153 fifth grade, 151 eighth grade, and 13? eleventh grade essays. A team of 18 teachers experienced in analytic scoring evaluated the papers and generated 14 independent variables such as words per clause, words written, fragments, and spelling errors, which were used as predictors of holistic score.

Grobe found that measures of vocabulary diversity correlated highly with the rated quality of the writing, and that vocabulary characteristics were more predictive of quality ratings than

measures of syntactic maturity and freedom from spelling errors. Grobe concluded by stating that his finding of the relationship between vocabulary diversity and rated quality of writing should not be understood as a basis for teaching vocabulary to improve writing. However, both Grobe's and Neilsen and Piche's results encourage investigation as to whether preteaching vocabulary might facilitate writing.

If vocabulary were taught before writing, it could be termed a prewriting activity. Other prewriting activities have already been shown to facilitate writing. The next section briefly discusses prewriting activities currently used and describes two studies concerning prewriting at the college level.

Prewriting Activities and their Effects

Prewriting activities such as freewriting, listing, question-asking, and discussing are all used as techniques to encourage creative writing and generate an awareness of the writing process (Elbow, 1981). Guides to writing advocate special remembering, discovering, exploring, collecting, brainstorming, listing, reflecting, and describing as prewriting strategies (Cooper, 1981). Beach and Stein (1981) claim that we have moved away from "writing as producing a product to writing as engaging in cognitive processes of formulating, exploring, limiting, reconceiving, shaping, and editing" (p. 1). The formulating stage has become a period of extensive prewriting. Prewriting "legitimizes thinking as a preliminary to immediate paper production" (Flower & Hayes, 1980, p. 32).

Several reseachers have tried to measure the effect of the pre-write, write, re-write process on writing. Cummings (1981)

investigated the effect of teaching writing according to a process view of composing involving prewriting, writing, and revision. Subjects were students assigned to basic writing classes at a small urban university in the South. Students in the experimental group participated in structured, sequential activities in preparing expository essays for their English course. The activities included journal writing, individual and group prewriting sessions, student-teacher prewriting conferences, preliminary draft workshops, peer evaluations, rewriting, and student-teacher revision conferences. Students in the control group pursued a traditional course that did not include any prewriting or rewriting activities. Cummings' specific questions were whether the experimental treatment would improve the students' writing skills and how the students would respond to the experimental treatment.

Dependent measures included a pretest essay, a posttest essay, and written accounts of their composing strategies written by the students. At the end of the semester, 13 randomly-selected pre and posttest essays from each treatment group were scored by independent raters. A t-test revealed that the mean score for the experimental group's essays was significantly higher than that of the control group. The written accounts showed that students in the experimental group used prewriting techniques in writing their posttest essays. However, although this study shows significant results, little detailed explanation is given about the actual form of prewriting instruction used. Moreover, because this study was both long-term and involved studying the entire composing process, one

cannot single out prewriting as the cause for improving writing. Perhaps the cause was simply a greater awareness for writing. The next study offered a bit more information because it attempted to limit its scope to measuring the effect of prewriting instruction alone.

Odell (1974) sought to evaluate the effect of prewriting instruction on his two sections of freshman English. Odell predicted the following outcomes by the end of the semester: The students would examine data more thoroughly; the students' essays would be better organized and contain fewer conceptual gaps; and the students would solve problems more adequately. Odell contended that if a student thoroughly investigates data and works with it in prewriting strategies, the improved understanding of the material would allow for a better presentation of ideas and a better solution of the problem. Odell's course was divided into six instructional units of equal length. In the first two weeks, he introduced his students to philosophical and psychological assumptions underlying the semester's work; and in the remaining ten weeks, he taught various prewriting operations. All discussion and evaluation of the student essays was focused on questions concerning whether the student writer correctly stated a problem, correctly spoke to the problem posed, and correctly supported his or her solution with assertions and evidence. Twenty paired pre and posttest essays were scored, with the scores reflecting the extent to which the students examined the data, used the prewriting operations, avoided conceptual gaps, and provided supporting evidence and adequate solutions.

Results showed that in the posttest essays there was statistically significant evidence that students had examined data more thoroughly than in the pretest essays and had used the prewriting operations. The students' posttest essays also showed a significant increase in use of evidence to support solutions. There was not significant evidence that the posttest essays contained fewer conceptual gaps that did the pretest essays.

Although evidence for the relationship between reading and writing, the success of preteaching vocabulary on comprehension, and studies of the effects of vocabulary on judgements of writing have suggested that preteaching vocabulary may effect the quality of students' writing, only one study was discovered which directly investigated this possibility. The next section discusses this study and briefly describes a preliminary study conducted by the author.

Preteaching Vocabulary as a Prewriting Activity

Wolfe (1975) examined the effect of teaching a reading vocabulary on the vocabulary students used in their writing. Two methods of teaching vocabulary were investigated. In the first method, students practiced with the words by reading and writing sentences in which the words were used; and in the second method, students practiced identifying the meanings of the words by means of multiple-choice exercises. Wolfe also investigated the extent to which students continued to employ the taught vocabulary in their writing after the program had been completed. Her subjects were 75 community college freshmen enrolled in a remedial reading course. The subjects were randomly assigned to treatment or control groups. Students in the treatment group participated in

one of the two vocabulary programs described above. The instruction took place 20 minutes three times a week for six weeks. Students in the control group received no vocabulary instruction but rather completed study skills exercises. Both groups wrote three pre-treatment themes, three post-treatment themes immediately after completing the program, and three delayed treatment themes six weeks after completing the program.

The themes were analyzed for complexity of the vocabulary used, use of words taught in the vocabulary program, and use of words of the same levels of complexity as the words taught in the program but not included in the program. Thorndike's Teacher's Word List of 30,000 Words (1944) was used to assess the complexity of words used in the themes.

Unfortunately, Wolfe's discussion of the results is difficult to interpret. She states three conclusions. First, that the teaching of a specific reading vocabulary had a facilitative effect on students' use of words having the same level of complexity as the words taught in the program. Second, that practice with words in sentences had a facilitative effect on the retention of the use of words in student themes. Third, that the data did not support the hypothesis that words taught in the program would be used in the students' writing or that teaching a specific reading vocabulary affected the complexity of the vocabulary used in writing. While presumably sound in theory, this study fell short of finding fully interpretable results.

In a preliminary study, the author examined the effect of preteaching a set of 11 words that lend themselves to writing

about a particular topic on students' use of the words in a writing task targeted to the use of the words and on the quality of the students' writing. Subjects were 42 fifth grade students from a rural midwestern middle school. The fifth grade was divided into three language arts classes, one containing lower ability students, one middle ability students, and one higher ability students.

The pre-treatment writing task was administered to all the students by the regular language arts teacher approximately five weeks prior to the study. The high and low ability sections were given the experimental treatment, while the middle ability section served as the control group. The experimental treatment required three consecutive days of intense vocabulary instruction administered by the regular language arts teacher. The first six words were taught to the experimental groups on Day One, the last five words were taught on Day Two, and all eleven words were studied together on Day Three. On Day Four the experimental and control groups were given a post-treatment writing task, and on Day Five the experimental groups responded to a questionnaire.

Students in the experimental groups used the words in their post-treatment writing task. Two independent raters scored students' pre-treatment and post-treatment compositions on the basis of a four descriptor analytic scale. The analysis indicated that all groups, experimental and control, gained significantly on the quality of writing from pre to post task. Further investigation revealed that the regular language arts teacher had given the control group an added incentive on the post writing task as a substitute for their not participating in

the vocabulary unit. Students in the control group were given an amount of play money based on their performance in the post writing task. This play money was then used to purchase pencils and paper at an auction held the next day. While the experimental treatment may explain the gains in quality of writing for the experimental groups, the added incentive given to the control group may explain the control group's gain.

The present study revised the instruction used in the preliminary study by eliminating one vocabulary word and one word association activity, adding two writing activities, and spreading the instruction over an additional day. An additional dependent measure was added to measure the students' knowledge of the words taught. Careful attention was also given to insure that the pre and post treatment writing instructions given to each of the groups were identical.

The Present Study

The present study investigated the effect of preteaching a set of 10 words that lend themselves to writing about a particular topic on the students' use of the words in a writing task targeted to the use of the words and on the quality of the students' writing. Due to an increased knowledge of the pretaught words, the words should be more readily accessed when the student searches his or her lexical file during the targeted writing task. Due to the increased fluency in the use of the words, the student should be more free to focus his or her attention on other aspects of the writing.

While there is ample research on the relationship between reading and writing and while prewriting has been successfully

used to improve writing quality, little research has dealt with preteaching vocabulary and its effect on subsequent writing. It is in the context of writing that children may have the best opportunity to develop and test their conceptual knowledge of words. Preteaching vocabulary would thus seem to merit serious attention.

CHAPTER III

METHODOLOGY

This chapter describes the subjects, the materials, the experimental and control treatments, the procedures followed in administering the treatments, the procedures followed for scoring each dependent measure, and the design and analysis used.

Subjects

The subjects were 50 fourth grade students from an elementary school and 55 sixth grade students from a middle school in rural Iowa. The schools are predominantly white, with 2% being children of Hispanic migrant workers. The fourth grade was composed of two homogeneous sections, while the sixth grade was divided into three language arts sections, one containing lower ability students, one middle ability students, and one higher ability students. A sixth grade student's placement was based on his or her vocabulary and reading scores on the Iowa Tests of Basic Skills (1979) and his or her prior class performance. Vocabulary and reading national percentile scores were available for all fourth and sixth grade students on tests given during September, 1982.

Vocabulary percentiles for the fourth grade experimental group ranged from the 16th to the 93rd percentile with the mean being the 57th percentile; reading percentiles ranged from the 16th to the 94th percentile with the mean being the 58th percentile. Vocabulary percentiles for the fourth grade control group ranged from the 2nd to the 93rd percentile with the mean being the 57th percentile; reading percentiles ranged from the

2nd to the 99th percentile with the mean being the 54th percentile.

Vocabulary percentiles for the sixth grade higher ability group ranged from the 20th to the 99th percentile with the mean being the 77th percentile; reading percentiles ranged from the 23rd to the 99th percentile with the mean being the 75th percentile. Vocabulary percentiles for the sixth grade middle ability group ranged from the 20th to the 99th percentile with the mean being the 56th percentile; reading percentiles ranged from the 7th to the 83rd percentile with the mean being the 44th percentile. Vocabulary percentiles for the sixth grade lower ability group ranged from the 17th to the 80th percentiles with the mean being the 44th percentile; reading percentiles ranged from the 7th to the 58th percentile with the mean being the 29th percentile.

The fourth grade classes at the elementary school were reading in the Houghton Mifflin Beacons (1981) book. They were also working in the +10 Vocabulary Booster program (McGraw-Hill, 1973). This required students to listen to nine taped lessons, each including instruction on five new words. The instruction was followed by a story, comprehension questions, and a short vocabulary test. At the end of the nine taped lessons, a multiple-choice mastery test was given. The teacher read the test to several students in each class who had trouble reading. Free-reading was heavily stressed by the teacher with free-reading festivals, reading-cookie days, reading to "little buddies" (first grade students in the same building), and other similar activities. Writing assignments had included writing to

penpals in Florida, writing short autobiographies, writing book reports, and some creative writing. Prewriting instruction consisted of the teacher's briefly explaining why the students were doing a particular assignment.

The fourth grade language arts teacher's instructional behavior could be described as organizational, socio-cultural, and verbal-pedagogical according to Duffy and Roehler's category system (1982). Her organization was evident from the manner in which the students behaved. They knew exactly what subject came when, how to quickly group up or work individually, and what tasks they should continue working on if they finished a worksheet earlier than their peers. It appeared that good working relationships and efficient ways of resolving role conflicts had been developed. The teacher repeatedly spoke of her goal as teaching academics and developing positive self-concepts.

The sixth grade classes were reading in the Houghton Mifflin Banners book (1981). The sixth grade language arts teacher was not responsible for teaching reading and therefore concentrated on teaching writing, spelling, punctuation and usage, and some literature. All three sections, though differing in ability, received the same instruction. Writing assignments consisted of a variety of activities taken from teacher guides. For example, students would read short paragraphs that outlined particular situations or problems and then write solutions or tell what they would do if they were in those positions. Prewriting instruction consisted of the teacher's briefly talking about the assignment and explaining the directions.

The sixth grade language arts teacher's instructional behavior could be categorized as responsive according to Duffy and Roehler's category system (1982). He allowed students to explore and experience the materials and responded to the "teachable moments" that would arise. During instruction he followed the directions given in a teacher's guide, and after this instruction he put his book aside and asked the students to explain what they had learned in their own words. He used the students' responses as an opportunity to further teach the particular concept being dealt with. He typically followed this instruction with a homework assignment, and circulated about the room answering questions as students worked on the assignment.

Materials

Materials included a pre-treatment writing assignment for a narrative about camping, a ten-item vocabulary pretest and posttest, a vocabulary instructional booklet for the students and a teacher's guide similar to those used by Beck and her associates (Beck, McCaslin, & McKeown, 1980; Beck, Perfetti, & McKeown, 1982; McKeown, Beck, Omanson, & Perfetti, 1983), a post-treatment writing assignment for a narrative about exploring, and an attitude inventory.

The pre-treatment writing assignment about camping asked the students to remember a time when they had gone camping or to imagine what could happen if they went camping. They were asked to describe what happened or what could happen, and how they felt or could feel. The actual assignment is included in Appendix A.

The ten-item vocabulary pretest contained the ten words to be taught randomly ordered. Each item consisted of the word

being tested as the stem and four alternatives. The test was read to the students, and time was allowed after each item for marking an answer. The posttest contained the same items arranged in a different random order. The actual pre and posttests are included in Appendix B.

The vocabulary instructional booklet contained worksheets that accompanied the unit. Students could keep these booklets and write in them as the activities dictated. The booklet did not contain the pre and post vocabulary tests or the pre and post writing tasks. A teacher's guide contained detailed instructions for the cooperating teachers. Each day's activities were outlined and each section consisted of explicit directions for its particular activity. The vocabulary instructional booklet is included in Appendix C, and the teacher's guide for the unit is included in Appendix D.

The post-treatment writing assignment about exploring asked the students to remember a time when they went exploring or to imagine what could happen if they went exploring, and to describe what happened and how they felt. The actual assignment is included in Appendix E.

The attitude inventory consisted of 13 statements. Eight positively and five negatively phrased statements were randomly arranged. The beginning and the final three statements dealt with students' overall feeling toward the unit, and the middle statements dealt with their reactions to specific parts of the unit. Students were asked to respond to the statements with one of five possible responses: Strongly Disagree, Disagree, Undecided, Agree, and Strongly Agree. The attitude inventory is

shown in Appendix F.

Experimental and Control Treatments

The experimental treatment consisted of four days of activities designed to teach a set of 10 words that lend themselves to writing about a particular topic. As with the Beck studies noted earlier, it was the experimenter's intent in this study to include a variety of instructional strategies in order to allow students to manipulate words in various ways. This varied and enhanced instruction should result in a greater understanding of the words and greater ability and flexibility in using the words in the targeted writing assignment. A description of the treatment, which as already mentioned, relies heavily on the work of Beck and her colleagues, is given below.

In introducing the new words, discussion centers on a particular schema. Again, in this case, the schema is exploring. The exploring schema conjures up feelings of excitement and restlessness. The first word is introduced within this schema. The instruction continues by employing traditional vocabulary instruction in that a definition is presented and students use the new word in a sentence. The words are then further dealt with using instructional strategies beyond those of defining and generating sentences. The concepts the words represent are developed as students respond to situations created by the words, associate well-known words with the new words, and articulate why a word represents a certain feeling or activity. In summary, each word is taught in terms of the concept it represents, the relationships it shares with other words, and the schemata within which it can be used when writing.

Day One dealt with the first five words and began with the teacher's introducing the words in sets of two. The teacher told the students that they were going to learn some words which they could use when writing about exploring something new and mysterious. The teacher asked how the students felt when they began to explore something new and mysterious, and their responses were put on the board. Words denoting restlessness were circled and the first new word, fidgety, was written on the board and circled. Students next pronounced the word, spelled it aloud, found it in their booklets, read the definition given in their booklets, and wrote fidgety on the blank line next to fidgety in their booklets. The teacher then asked the students to think of a time when they felt fidgety and to share their responses with a neighboring student. The remaining four words were introduced in a similar manner.

A word association activity came next. Students were asked to respond to the situation created by two words. The first word read was a well known word, and the second word read was a new word. If the students thought the situation created by the two words seemed good, they responded by saying, "Alright!" If the students thought the situation created by the two words seemed bad, they responded by saying, "No way!" Whatever their choice or if they gave mixed responses to a pair of wofds, students were asked to explain why they had chosen to respond as they had. Any responses students could justify were accepted.

The teacher then directed the students to turn to their vocabulary booklets where the students as a group reviewed the definitions for the five new words and completed open-ended

sentences that used the words. This was followed by a writing activity in which each student picked one of the new words and used it in a new sentence. Five cards, each with one new word on it, were taped in separate areas around the room. Students were told to go to the area that displayed the word they had used in a sentence. Students shared their sentences with the other students who had chosen to use the same word. After students returned to the large group, the class discussed which words were easily used and which were not.

Two activities took place outside of class time. These were called Secret Word of the Day and Say It To Someone. Each day, the teacher or experimenter picked one word to be the secret word of the day. If a student guessed the correct word and used it correctly in a sentence, he or she would get a small prize such as a sticker. If a student spoke, saw, heard, read, or used a new word in any way outside of class, and if he or she could prove that he or she had used the word, his or her name would be placed above the appropriate word on the Say It To Someone chart. At the end of the week, the student who used the words the greatest number of times received a grand prize such as a pack of pencils or a memo pad.

Day Two of the instruction began with a quick review of the five words already taught. This was followed by the first lap of Ready, Set, Go. Lap One of Ready, Set, Go was a matching activity involving the first five words learned. Each student worked with a partner and was either a "runner" or a "timer." As a "runner" a student would read each word and match it to its correct definition. As a "timer" a student would keep track of

how long it took the runner to finish the lap.

Following this activity, the remaining five words were introduced in the same manner as were the words on Day One. Again, this was followed by a word association activity. Students were read a phrase and asked to respond with the new word that came to their minds when they heard the phrase. For example, the phrase, "mountain climbing" elicited the response, "perilous." After answering, students were asked to explain why they had chosen a particular word. Following this, the students again completed open-ended sentences using the five words.

The next activity incorporated all ten words being taught. The teacher asked a question that used one of the words and asked students to respond by putting their thumbs up for "yes" or their thumbs down for "no." The first question, using the word shudder, was, "Would a giant shudder when seeing a mouse?" Students were again asked to explain why they chose a particular answer. Day Two concluded with a writing activity called Mini-Stories. All ten words were written on the board in large letters. Students were arranged in groups of four and instructed to compose a mini-story that used some of the words. The teacher shared a sample story contained in the teacher's guide with the class, and then each group wrote a mini-story. Each group also chose one person to read their mini-story to the entire class. While the stories were read, students kept a tally of how often each new word was used. At the end of this activity, students were asked to offer suggestions as to why some words were used more often than others, and if a word was never used, to offer suggestions as to how that word could have been used. At the end

of the class, a reminder was given concerning the on-going Secret Word of the Day and Say It To Someone activities.

Day Three of the instruction began with a quick review of the five new words taught on Day Two. This was followed by a second lap of Ready, Set, Go. Lap Two involved only the last five words and was conducted in the same manner as Lap One. This was followed by an oral and written activity in which students heard sentences with the final word omitted. Students were asked to think of the new word that would correctly finish the sentence and write it in a blank in their booklets. For example, the sentence involving the new word petrified was, "If you are so scared that you freeze in your tracks, you are _____." The next activity was called Skeleton Story Writing. Students were again arranged in groups of four and instructed to compose skeleton stories that consisted of placing the major points of a plot on the backbone of a skeleton. Words that could possibly be used in the story were then placed on the arms and legs of the skeleton depending on where they would occur in the story. Each group chose a storyteller and a judge, and the stories were read and judged by the students. This was followed by a third lap of Ready, Set, Go. Lap Three involved all ten words and was conducted in the same manner as laps One and Two. Again, the Secret Word of the Day and the Say It To Someone activities were continued.

Day Four of the instruction began with a pantomime activity. Students were arranged in groups of two, and each group was given a new word. The entire group practiced by acting out the words shudder and investigate, after which each group presented a

pantomime and the other students guessed the correct word. At the end of the activity, a discussion concerning why some words were easier to pantomime than others took place. This was followed by the vocabulary posttest. After the test, students were told that on the following day they would be asked to write a new story. Day Four concluded with mention of the on-going Secret Word of the Day and Say It To Someone activities.

Day Five was used for the post-treatment writing task. Students were told that they could refer to their vocabulary booklets if they wanted to during this task. On Day Six the students were given the attitude inventory described earlier in this chapter. An outline of the entire instructional unit is included in Appendix G.

The control groups' activities varied according to grade. During the four days of activities, the fourth grade control group worked on a public speaking unit developed by the fourth grade language arts teacher. Students were instructed on how to write and present short speeches. The speeches were presented in front of the class and critiqued by the students' themselves. Following this activity, the students wrote commercials about their own self-created product. These commercials lasted one minute each and were supposed to be interesting and enjoyable. Again, the instruction was developed by the fourth grade teacher. The control group received the pre and post vocabulary tests and the pre and post writing tasks on the same days as the experimental group. The fourth grade experimental group participated in this same unit the week following the experiment.

The sixth grade control group worked in two areas during the

four days of activities. On two days, the group continued in their regular language arts text studying capitalization. The sixth grade language arts teacher followed the instructions in the text and led the students through sample exercises on capitalization. Following this, homework was assigned, and students worked on the exercises in class while the teacher circulated around the room answering questions. The sixth grade language arts teacher was also the sixth grade social studies teacher. Therefore, he took some of his language arts time to teach part of a geography unit. Students worked on assignments identifying the countries of Africa and their locations. The sixth grade control group received the pre and post vocabulary tests and the pre and post writing tasks on the same days as the experimental group. The sixth grade experimental group participated in the same activities outlined above the week following the experiment.

Procedures Followed in Administering the Treatments

Preliminary work on the study began in December, 1982. The fourth and sixth grade classes were observed on three days in mid December, and the design of the study and timelines were explained to the cooperating teachers. Following this observation, the pre-treatment writing task was administered to the fourth grade students by their language arts teacher. The pre-treatment writing task was administered to the sixth grade students during the second week in January, 1983, by their language arts teacher. A week before the study, the teachers administered the ten-iten multiple-choice vocabulary pretest on the ten words to be taught.

The study was conducted between February 28 and March 7, 1983. One section of the fourth grade and the higher and lower ability sections of the sixth grade were given the experimental treatment, while the other section of the fourth grade and the middle ability section of the sixth grade served as the control groups. As noted above, the experimental treatment required four class periods. The first five words were taught on Day One; the last five words were taught on Day Two; and all ten words were studied together on all of Day Three and half of Day Four,. On the last half of Day Four, the experimental and control groups were given the ten-item multiple-choice vocabulary posttest. On Day Five all students were given the post-treatment writing task, and on Day Six the experimental groups responded to an attitude inventory. All of the classes were taught by their usual teachers and were observed by the experimenter.

Scoring Procedures

All of the students' pre-treatment and post-treatment writing papers were typed and randomly ordered. The experimenter then tallied the number of words taught used by the experimental and control groups and computed the means. Two independent raters then scored the compositions on the basis of a four descriptor analytic scale modeled after the suggestions of Cooper and Odell (1977), Diederich (1974), and Fagan, Cooper, and Jensen (1975). The four descriptors were (1) sequence of events and structure, (2) wording, (3) substance and content, and (4) entertainment. Each contained an explanation of what high, middle, and low ratings for each descriptor meant. For example, the explanation for a high rating for the sequence of events and

structure descriptor stated that "The order of events is always clear, and the story flows in an interesting, well-organized manner." A high rating received a score of 10, a middle rating a score of 6, and a low rating a score of 2. The raters could also choose a score of 4 or 8, or those scores in-between these ratings. The complete scale is shown in Appendix H.

All of the vocabulary pretests were scored by another researcher and checked by the experimenter. The number of correct items was tallied and recorded for each student, and class means were computed. The vocabulary posttests were also scored by another researcher and checked by the experimenter. The correct items were again tallied and recorded, and means were computed.

The responses in each of the five categories for each question on the attitude inventory were tallied by the experimenter. The numbers of students who agreed, disagreed, or were undecided on each statement were totaled. Strongly Disagree and Disagree were counted as Disagree, and Strongly Agree and Agree were counted as Agree. The totals for each of the three sets, Agree, Disagree, and Undecided were then changed to percentages in order to facilitate their interpretation.

Design and Analysis

The study employed a 2 X 2 factorial design, with the variables being treatment (vocabulary instruction, no instruction) and test time (pretest, posttest). Words taught used in the compositions were tallied and means were computed. Vocabulary knowledge was measured by the multiple-choice test, and quality of writing was measured by a four descriptor analytic

scale. Separate analyses of variance were performed for these two dependent measures. Newman-Keuls tests were used as follow-up tests. Reliability coefficients for the two raters' analytic scale totals were .44 for the fourth grade pre-treatment narratives and .60 for the fourth grade post-treatment narratives. Reliability coefficients for the sixth grade were .30 for the pre-treatment narratives and .77 for the post-treatment narratives. The results are presented in the following chapter.

CHAPTER IV

RESULTS

This chapter presents the results as measured by the number of taught words students used in their narratives, the vocabulary tests, the writing tasks, and the attitude inventory.

Number of Taught Words Used

Table 1 shows the fourth grade experimental and control groups' mean results on the number of taught words used in their narratives.

Table 1

Mean Number of Vocabulary Words Used by the Fourth Grade Experimental and Control Groups

	Task	
Treatment	Pre-Treatment	Post-Treatment
Experimental	0.00	8.20
Control	0.00	0.00

As can be seen, students performed equally on the pre-treatment writing task. Students who received the instruction used the words on the post-treatment writing task, however, those without the instruction did not.

Table 2 shows the sixth grade experimental and control groups' mean results on the number of taught words used in their narratives.

Table 2

Mean Number of Taught Words Used by the Sixth Grade Experimental and Control Groups

	Task	
Treatment	Pre-Treatment	Post-Treatment
Experimental (High Ability)	0.00	4.08
Control (Middle Ability)	0.00	0.00
Experimental (Low Ability)	0.00	4.08

Again, students performed equally on the pre-treatment writing task. Again, however, on the post-treatment writing task students who received the instruction used the words, whereas those without the instruction did not.

Vocabulary Tests

Table 3 shows the fourth grade experimental and control groups' mean proportion correct on the vocabulary knowledge pre and posttests.

Table 3

Mean Proportion Correct on Vocabulary Knowledge Test for the Fourth Grade Experimental and Control Groups

	Test Time	
Treatment	Pretest	Posttest
Experimental	.58	.94
Control	.57	.57

As can be seen, students in both groups performed equally on the vocabulary pretest; however, on the posttest, students who received the instruction increased their knowledge of the words, whereas those who did not receive the vocabulary instruction did not.

An analysis of variance with treatment as a between-subject factor and test time as a within-subject factor revealed a reliable interaction between treatment and testing time, $F(1, 38) = 29.82$, $p < .001$, and Newman-Keuls tests indicated that on the pretest there was no reliable difference between the experimental and control groups, while on the posttest the difference between groups was reliable, $p < .01$.

Table 4 shows the sixth grade experimental and control

groups' mean proportion correct on the vocabulary knowledge pre and posttests.

Table 4

Mean Proportion Correct on Vocabulary Knowledge Test for the Sixth Grade Experimental and Control Groups

	Test Time	
Treatment	Pretest	Posttest
Experimental (High Ability)	.77	.99
Control (Middle Ability)	.58	.62
Experimental (Low Ability)	.72	.95

As noted before, in the sixth grade, two classes (one of higher ability students and one of lower ability students) served as experimental groups and one class (a class of middle ability students) served as the control group. As can be seen, students in the experimental groups outperformed students in the control group on the pretest; however, the proportions correct on the posttest show that students who received the instruction increased their knowledge of the words, whereas those students who did not receive the vocabulary instruction did not increase their knowledge of the words.

An analysis of variance with treatment as a between-subject factor and test time as a within-subject factor revealed a

reliable interaction between treatment and test time, $F(1, 34) = 6.65$, $p < .02$, and Newman-Keuls tests indicated that on the vocabulary pretest the experimental groups outperformed the control group. On the vocabulary pretest, students in the high and low ability experimental groups scored higher than students in the middle ability control group, $p < .05$. On the vocabulary posttest, students in the high and low ability experimental groups again scored higher than the students in the middle ability control group, $p < .001$. Of more importance here, however, are analyses of each group's gain scores from pretest to posttest. These show only the experimental groups to have significant gains from pretest to posttest. The high ability experimental group scored significantly higher from pretest to posttest, $p < .01$, and the low ability experimental group also scored significantly higher from the pretest to the posttest, $p < .01$. The middle ability control group did not show such a gain, $p > .05$.

Writing Tasks

Table 5 shows the fourth grade pre and post mean results on the quality of writing measure for the experimental and control groups.

Table 5

Mean Scores on Quality of Writing Measure for the Fourth Grade Experimental and Control Groups

	Task	
Treatment	Pre-Treatment	Post-Treatment
Experimental	19.00	23.45
Control	18.15	18.20

As can be seen, students in both groups performed equally on the pre-treatment writing task. The students who received the instruction showed a large increase in their writing quality scores on the post-treatment writing task, whereas those students without the instruction did not show a large increase.

An analysis of variance with treatment as a between-subject factor and writing task time as a within-subject factor revealed a reliable interaction among treatment and writing task time, $F(1, 38) = 8.61$, $p < .01$, and Newman-Keuls tests indicated that on the pre-treatment writing task there was no reliable difference between the experimental and control groups, while on the post-treatment writing task the difference between groups was reliable, $p < .01$.

Table 6 shows the sixth grade pre and post mean results on the quality of writing measure for the experimental and control groups.

Table 6

Mean Scores on Quality of Writing Measure for the Sixth Grade Experimental and Control Groups

	Task	
Treatment	Pre-Treatment	Post-Treatment
Experimental (High Ability)	20.42	26.50
Control (Middle Ability)	19.42	20.58
Experimental (Low Ability)	18.74	25.34

Again, the high and low ability groups served as the experimental group and the middle ability group served as the control group. As can be seen, students in all three ability groups performed within two points of each other on the pre-treatment writing task. However, the students who received the instruction again showed a large increase in their writing quality scores on the post-treatment writing task, whereas those students without the instruction showed a small increase.

An analysis of variance with treatment as a between-subject factor and writing task time as a within-subject factor revealed a reliable interaction between treatment and writing task time,

$F(1, 34) = 26.02$, $p < .001$, and Newman-Keuls tests indicated that on the pre-treatment writing task there was no reliable difference between the experimental and control groups while on the post-treatment writing task some differences among the groups were reliable. Both the high and low ability experimental groups scored reliably higher than the middle ability control group, $p < .001$. The two experimental groups (high and low ability) did not reliably differ from each other, $p > .05$.

Attitude Inventory

Tables 7 and 8 show the fourth and sixth grade experimental groups' responses to the attitude inventory. The tables are shown on pages 47 and 48. In the following discussion, the attitude inventory statements are grouped by topic. Statement 1 and statements 11 to 13 dealt with students' overall feeling toward the unit. The majority of students (4th grade = 96%, 6th grade = 83%) indicated that the instruction had helped them to increase their use of the words in sentences and stories. A majority of students enjoyed the unit (4th = 85%, 6th = 69%), didn't think it was too long (4th = 74%, 6th = 79%), and felt they could use the words in speaking and writing (4th = 81%, 6th = 75%).

Questions 2 to 9 dealt with students' reactions to specific parts of the instructional unit. The majority of students (4th = 70%, 6th = 72%) indicated that thinking about situations helped them learn the words, that completing sentences helped them better understand the words (4th = 89%, 6th = 70%), and that writing the words in other sentences also helped them learn the words (4th = 88%, 6th = 53%). A slight majority of fourth grade

students indicated that they tried to say the new words to someone outside of class (56%), while the sixth grade did not as frequently attempt to use the words outside of class (39%). The majority of students enjoyed guessing and using the secret word of the day (4th = 100%, 6th = 83%), writing a mini-story with other students (4th = 76%, 6th = 64%), and pantomiming the words (4th = 78%, 6th = 67%). The majority of students indicated that the laps helped them learn the words (4th = 73%, 6th = 76%).

Table 7

Fourth Grade Responses to Attitude Inventory

	D = Disagree U = Undecided A = Agree	D	U	A
1.	The instruction helped me learn how to use the vocabulary words in a story or sentences.		4%	96%
2.	Thinking about situations that used the words did not help me to learn the words.	70%	30%	
3.	Completing sentences in the student booklet helped me to understand the words.		11%	89%
4.	Writing the words in other sentences helped me to learn the words.	4%	8%	88%
5.	I tried to say the new words to someone outside of class.	11%	33%	56%
6.	I enjoyed trying to guess and use the secret word of the day.			100%
7.	I did not enjoy writing a mini-story with other students.	96%	4%	
8.	I enjoyed pantomiming the words.	7%	15%	78%
9.	The laps did not help me to learn the words.	73%	8%	19%
10.	I tried to use some of the vocabulary words in the final writing task.	4%		96%
11.	I did not enjoy the vocabulary unit.	85%	11%	4%
12.	The vocabulary unit was too long.	74%	15%	11%
13.	I feel that I am able to use the words I learned in speaking and writing.	4%	15%	81%

Table 8

Sixth Grade Responses to Attitude Inventory

D = Disagree U = Undecided A = Agree

		D	U	A
1.	The instruction helped me learn how to use the vocabulary words in a story and sentences.	3%	14%	83%
2.	Thinking about situations that used the words did not help me to learn the words.	72%	17%	11%
3.	Completing sentences in the student booklet helped me to understand the words.	8%	22%	70%
4.	Writing the words in other sentences helped me to learn the words.	22%	25%	53%
5.	I tried to say the new words to someone outside of class.	22%	39%	39%
6.	I enjoyed trying to guess and use the secret word of the day.	6%	11%	83%
7.	I did not enjoy writing a mini-story with other students.	64%	17%	19%
8.	I enjoyed pantomiming the words.	8%	25%	67%
9.	The laps did not help me to learn the words.	76%	9%	15%
10.	I tried to use some of the vocabulary words in the final writing task.	29%	14%	57%
11.	I did not enjoy the vocabulary unit.	69%	14%	17%
12.	The vocabulary unit was too long.	79%	15%	6%
13.	I feel that I am able to use the words I learned in speaking and writing.	17%	8%	75%

Question 10 dealt with the students' use of the words taught in the final writing task. A solid majority of fourth grade students (96%) tried to use the words in the final writing task, while only a slight majority in the sixth grade tried to use the words (57%).

The results on all of the measures are discussed in the following chapter.

CHAPTER V

DISCUSSION

This chapter gives an overview of the results of the study, speculates on the cognitive effects which made the instruction effective, speculates on the attributes of the instruction which made it effective, discusses the implications for future research, and presents a very brief concluding statement.

Overview of the Results

The results on the number of words used in the compositions are straightforward. Both the fourth and sixth grade students who received the instruction used the words in their narratives, while those who did not receive the instruction did not use the words in their narratives. Fourth grade students receiving the vocabulary instruction used an average of about 80% of the words in their narratives, while the sixth grade students receiving the instruction used an average of only about 40% of the words in their narratives. Upon reading these narratives, one notices the fourth grade experimental group's zeal in using the words. This reflects this group's overwhelmingly positive response toward the unit. However, while the fourth grade experimental group used 80% of the words in their narratives, they did not use the words correctly in all circumstances. In contrast, the sixth grade experimental groups' narratives showed a more tentative but more correct use of the words. This reflects the sixth grade experimental groups' interest and ability in using the words correctly.

The results on the vocabulary measure are also straightforward. Both the fourth and sixth grade students who received the instruction learned the words taught, while those who did not receive the instruction showed little if any gain in their knowledge of the words. Fourth grade students receiving the vocabulary instruction increased their scores from the pretest to the posttest by 62%, while the scores of fourth grade students not receiving the vocabulary instruction remained constant. Sixth grade students in the high ability experimental group increased their scores from the pretest to the posttest by 29%, and sixth grade students in the low ability experimental group increased their scores by 32%. Sixth grade students not receiving the vocabulary instruction increased their scores by only 7%. Although this was a short-term instructional unit, the results are consistent with those of the long-term studies of Beck and her associates described earlier (Beck, McCaslin, & McKeown, 1980; Beck, Perfetti, & McKeown, 1982; McKeown, Beck, Omanson, & Perfetti, 1983).

The results on the writing task are again straightforward. Both the fourth and sixth grade students who received the instruction significantly improved their quality of writing scores on the post-treatment writing task, while those who did not receive the instruction did not improve their quality of writing scores. Fourth grade students receiving the vocabulary instruction increased their writing scores by 23%, while the writing scores of fourth grade students who did not receive the instruction increased by only 3%. Sixth grade students in the high ability experimental group increased their writing scores by

30%, and sixth grade students in the low ability experimental group increased their writing scores by 35%. Sixth grade students in the middle ability control group increased their scores by only 6%.

The results on the attitude inventory indicate that the instructional unit was well received. The majority of students both enjoyed the unit's activities and attempted to use the new vocabulary in their writing. The fourth grade students tended to be more excited with activities focused on using the words outside of class, ones that could get their names put up on a poster. On the other hand, the sixth grade students tended to be more involved in the laps and more competitive activities. The question of whether the students felt that they were able to use the words in speaking and writing was given a positive response by students in both grades and indicates the students' perception that they learned from the unit. In addition, the four day instructional unit did not seem too long to the students.

Speculation on the Cognitive Effects Which Made the Instruction Effective

This section first presents the effects viewed in terms of current theory. This is followed by a less formal presentation of what perhaps occurs in a student's mind as a result of participating in this unit. This section concludes with a note concerning good instruction in general versus good vocabulary instruction in general.

Three lines of current theory can be looked at in search of an explanation concerning what made the instruction effective: First, that of vocabulary development as a form of concept

learning; second, that of the relationship of the taught words to other concepts in long-term memory; and third, that of automaticity in retrieving the newly developed concepts.

The student's knowledge of a word revolves around his or her mental representation of the word and his or her access to the word. Learning a definition alone does not create a full mental representation of a word's meaning or its concept. Vocabulary development as a form of concept learning was first described by Carroll (1964). Anderson and Kulhavy (1972) also suggested that concept learning techniques aid vocabulary development. According to Downing and Leong (1982), "Concepts can be learned from a small set of special instances, which might be called prototypes or examples of the concepts" (p. 214). Because students were taught the words according to the concepts they represent, their representations of the words did not appear to be based on a literal remembering of an exact definition. Rather, the students developed the concepts according to their past reactions and experiences. Beck et al. (1980) note that "instruction designated as concept learning is characterized by the presentation of examples contrasted with non-examples of a concept being introduced, and by classification exercises [and that] these activities require that the student distinguish the critical attributes of a word's meaning" (p. 214). By engaging in activities which required the students to distinguish the critical attributes of the taught words, the students formed their own prototypes of the words and therefore could employ the words later when composing their narratives.

The taught words must also be learned in terms of the

relationships they hold with other words. Rumelhart, Lindsay, and Norman (1972) and later Norman and Rumelhart (1975) describe memory representations as "active procedural networks." According to Lachman, Lachman, and Butterfield's (1979) explanation of Norman and Rumelhart, a network "accomodates word meanings, facts, task information and strategies, inferences, and other manipulations of words and facts" (p. 468). As a student is shown a word and its relationship to other words, "networks" can be developed between the new concepts and the older established concepts in the student's mind. In this experiment's instruction the words were presented and practiced through activities which sought to expand on these networks. Students were asked to recognize relationships between the taught words and other well-known words, thereby developing a deep understanding of the taught words.

In order to actively use the words that he or she knows, a student must be able to access them automatically. In short, a student's attention must be used to its best advantage. LaBerge and Samuels (1974) assume that one can only attend to one task at a time, but that one can perform other activities simultaneously if these activities do not require too much attention or if they have attained "automaticity." If a student has attained automaticity in his or her recognition of what a word means and when it can be appropriately used, that word may be automatically accessed, thus allowing his or her attention to be focused on other tasks. Through the use of instructional activities such as the Ready, Set, Go laps and the writing activities, students could increase their speed of lexical access to the words.

To summarize the above, as the students wrote their post-treatment narratives, they had in their minds full representations of the taught words, networks formed through repeated exposure to the relationships the taught words share with other words, and the ability to quickly retrieve the words through work toward developing automaticity. These three points brought out in current theory form a basis for speculation on the cognitive effects which made the instruction effective.

The effects can also be looked at in a less formal manner through personal speculation as to what happens to the individual student as he or she works with vocabulary and writing.

When a student first encounters a word, the student's use of that word in writing will be tentative. As the student works with the word and further defines and analyzes it, the word develops networks of relationships with the student's existing knowledge and prior experiences. When these link-ups occur, a student is better able to access the word when writing. The word has now become a part of that student's knowledge and may be accessed automatically.

The student's broadened knowledge of words can then contribute to the student's improved writing. If the concept the word denotes coheres with the narrative forming in a student's mind when working on a particular writing assignment, that word will be readily accessed. If the word has been taught in relationship to other words and within a particular schema, use of the word in the narrative will contribute to the overall cohesiveness of the story. For example, as the student accesses a word such as petrified, the sensory, emotional and descriptive

power of petrified guides the student to use the word only in an appropriate context. Because petrified indicates more than afraid, the student's narrative embodies a higher level of involvement and emotion than may have been indicated in past assignments.

By means of this type of instruction, the student has grasped the meaning of the new words and their relationship within a particular schema. The student uses the words when writing a story based on his or her own experiences or dreams. As the student forms words and thoughts into a narrative, the new words assist the student in clarifying what happened and how he or she felt. The new words give the student a new means of expression, a means which both clarifies and extends the impact of the story being developed. This increased expression, clarification, and extension in the student's writing represents writing improvement.

Through this instruction, learning vocabulary appears to contribute toward improving writing quality. This certainly does not mean that vocabulary instruction is the only means toward improving writing quality. Other forms of well-planned instruction can also improve writing quality. Conversely, bad vocabulary instruction probably would not improve writing quality; and, similarly, other forms of poorly planned instruction probably won't improve writing quality.

Again, to summarize, this study sought to explore the effects of good vocabulary instruction upon writing quality. While good instruction alone can improve writing quality, this study sought the effects of good vocabulary instruction upon

writing quality. This instruction was found to produce gains in writing quality. While these gains are short-term due to the short duration of the instruction, one would hope that continued units of this nature could produce long-term effects.

Speculation on the Attributes of the Instruction Which Made It Effective

The instructional attributes which I believe contributed to the instruction's positive effect were the exploring schema, the planned uniformity and planned diversity in the instruction itself, the excitement generated from the use of the two outside-of-class activities, and the instruction's adherence to teaching effectiveness principles.

Rather than being introduced simply as 10 new vocabulary words followed by their meanings, each word was introduced within the schema of an exploring adventure. Questions were asked which involved the students, requiring them to think of how they felt when they began to explore something, what they did when they found something strange and new, and how they described the new something. Before asking the students to work with the words in sentences, the teacher conducted an oral activity that involved the students in imagining still more situations where the words could be used. This invitation to both see the words and their definitions on paper and hear the words used in appropriate contexts as well as imagining new contexts contributed to the effectiveness of the instruction.

The three and one half days of instruction were uniform in format. The words were first introduced or reviewed in a similar manner each day. This was followed by an oral activity, practice

with the words in writing, and students' sharing their creative abilities by means of cooperative group writing and storytelling. The instruction offered diversity in that while each day had similar activities, these activities were not exactly the same. For example, on Day Two students wrote mini-stories, while on Day Three they wrote skeleton stories. As another example, on Day One the first oral activity involved responding to situations created by the new words, on Day Two the first oral activity involved responding with the new word that came to mind as a result of hearing a particular phrase, and on Day Three the first oral activity involved completing a sentence with the correct word.

Excitement was generated by the two on-going activities, the Secret Word of the Day and Say It To Someone activities. At the end of class, students would race to the appointed table in the back of the room, write their name and their "guess" (vocabulary word) for the day on a piece of paper, and stuff the paper into a box. Early the next morning as those names of students who had correctly guessed the secret word were posted on the classroom door, a crowd of excited students would form. Those who saw their names screamed and then quickly set to work composing their sentence which correctly used the "secret" word. Students were urged to "Say the Words to Someone," to keep their eyes open while reading in other textbooks, to keep their ears open in the hallways, and to be aware of finding or noticing the new words. As a result, words were noticed, used, and written down. Sentences were copied from TIME magazine, social studies' books, novels and newspapers. One student asked her mother and father

to page through the morning paper with her every day before she went to school in order to hunt for the new words and the sentences in which they were used. On the morning of the third day of instruction, as the National Anthem was being played over the loudspeaker, the students perked up their ears and smiled at each other as perilous took on a new dimension in their minds.

Finally, this instructional unit attempted to follow the major principles emerging from teacher effectiveness literature (Graves, 1983). Instruction was clearly distinguished from practice, every moment of each period was spent pursuing relevant material, and the structured unit was directed through active teaching by the teachers. Students were encouraged to share their creativity and by so doing experience success in their use of the words. Teachers communicated their excitement in teaching the students to learn and use the words, and the students responded by learning, recognizing, and using the words taught.

Implications for Future Research

To my knowledge, this is the first study in which a specific set of words has been intensively taught in an attempt to both teach students the words and improve the quality of their writing. Since the instruction was quite successful, future research in this area seems justified. I will briefly note five areas toward which future research could be directed.

First, the effect of repeated assignments of the sort employed in this experiment on writing quality and vocabulary knowledge could be studied. Second, students of other ages and from backgrounds more diverse than rural America could be studied. Third, as students of different ages and different

backgrounds are studied, the teaching strategies would have to be altered accordingly, and these modified strategies could be tested for their validity. Fourth, the effects of either condensing the unit into two days of instruction followed by one day of writing or of using longer or shorter sets of words could be studied. Fifth, sets of related words targeted to other writing genres could be chosen. For example, sets of words readily used in expository, explanatory, persuasive, biographical, or descriptive writing could be formed and activities developed to teach them. The writing quality scale could then be altered in accordance with the writing scheme. For example, a writing quality scale for persuasive writing would need to measure how well the writer states his or her belief on an issue and then moves the reader toward agreeing with that belief.

Concluding Statement

Writing experiences provide a means for a student to experiment with new words and the schemata the words have expanded within the student's mind. Writing allows the student not only to read and comprehend a new word but also to use it in a communicative setting, to use the word in a setting created by the student alone. In this way a greater precision of word usage develops not only as the student reads but also as the student creates. This precision of word usage in writing can be developed by using intensive vocabulary instruction similar to that described in this paper.

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APPENDICES

Appendix A: Pre-Treatment Writing Task

Appendix B: Pre and Post Vocabulary Tests

Appendix C: Vocabulary Instructional Booklet

Appendix D: Teacher's Guide

Appendix E: Post-Treatment Writing Task

Appendix F: Attitude Inventory

Appendix G: Outline of Instructional Unit

Appendix H: Analytic Scoring Scale and Scoring Sheet

APPENDIX A

PRE-TREATMENT WRITING TASK

The following was read to all students in the experimental and control groups before an entire class period was devoted to their writing their narratives.

> You decide to go camping in a wilderness. You can go alone or with a friend. How do you begin? What do you do? What do you find? What happens? How do you feel? Describe the adventure that you have.
>
> You may write for this entire period.

Name _____ Number right _____

_____ 1. fidgety

A. careless
B. tired
C. impatient
D. scared

_____ 2. petrified

A. quiet
B. funny
C. repaired
D. scared

_____ 3. astonished

A. surprised
B. frightened
C. bored
D. confused

_____ 4. shudder

A. to run
B. to stumble
C. to hit
D. to shake

_____ 5. investigate

A. to build
B. to examine
C. to clean
D. to break

_____ 6. genial

A. friendly
B. unhappy
C. crazy
D. lovely

_____ 7. hostile

A. unhappy
B. unfriendly
C. peaceful
D. lonely

_____ 8. perilous

A. careless
B. dangerous
C. mindless
D. mountainess

_____ 9. divert

A. to run ahead
B. to wrap around
C. to turn aside
D. to leave behind

_____ 10. coax

A. to quickly tell
B. to carefully play
C. to suddenly fall
D. to gently persuade

VOCABULARY POSTTEST

Name _____ Number right _____

_____ 1. fidgety

A. careless
B. tired
C. impatient
D. scared

_____ 2. investigate

A. to build
B. to examine
C. to clean
D. to break

_____ 3. coax

A. to quickly tell
B. to carefully play
C. to suddenly fall
D. to gently persuade

_____ 4. hostile

A. unhappy
B. unfriendly
C. peaceful
D. lonely

_____ 5. genial

A. friendly
B. unhappy
C. crazy
D. lovely

_____ 6. divert

A. to run ahead
B. to wrap around
C. to turn aside
D. to leave behind

_____ 7. shudder

A. to run
B. to stumble
C. to hit
D. to shake

_____ 8. astonished

A. surprised
B. frightened
C. bored
D. confused

_____ 9. petrified

A. quiet
B. funny
C. repaired
D. scared

_____ 10. perilous

A. careless
B. dangerous
C. mindless
D. mountainess

APPENDIX C

VOCABULARY INSTRUCTIONAL BOOKLET

— Vocabulary Booklet —

fidgety
petrified
astonished
shudder
investigate

genial
hostile
perilous
divert
coax

February 28 — March 4, 1983

Name _____

Vocabulary Words -- Day 1

1. fidgety _____ : to be impatient or restless.

I was fidgety before vacation because

2. petrified _____ : to be scared or dazed.

The creepy movie petrified Joe because

3. astonished _____ : to be amazed or surprised.

The girl was astonished when she first saw mountains because

4. shudder _____ : to shiver and tremble from fear or horror.

The sounds of the footsteps made him shudder because

5. investigate _____ : to search or examine something.

I heard some strange sounds and decided to investigate because

Writing Activity -- You may write your sentence here.

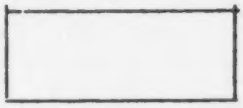
LAP 1 -- DAY 2

_____	1. petrified	A.	amazed or surprised
_____	2. fidgety	B.	to search or examine something
_____	3. shudder	C.	scared or dazed
_____	4. astonished	D.	impatient or restless
_____	5. investigate	E.	to shiver and tremble from fear

Time it took to finish:

_____ minutes

_____ seconds



penalty box

Name _____

Vocabulary Words -- Day 2

1. genial _____ : to be friendly, pleasant, and good-natured.

Santa Claus is very genial because

2. hostile _____ : to be unfriendly and mean.

After the fight the boys were hostile towards each other because

3. perilous _____ : to be risky or dangerous.

The trail along the cliff was perilous because

4. divert _____ : to turn aside; to change someone or something's attention.

The clown diverted the gorilla's attention by

5. coax _____ : to gently persuade.

The lion tamer slowly coaxed the lion back into its cage by

Mini-Story Writing Activity -- You may write your mini-story here.

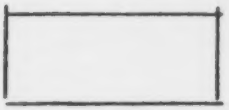
LAP 2 -- DAY 3

_____	1. divert	A.	risky or dangerous
_____	2. genial	B.	to gently persuade
_____	3. hostile	C.	to turn aside
_____	4. coax	D.	to be mean and unfriendly
_____	5. perilous	E.	friendly, pleasant, and agreeable

Time it took to finish:

_____ minutes

_____ seconds



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Vocabulary Word Activities -- Day 3

Oral Sentence Completion Activity

1. _____

2. _____

3. _____

4. _____

5. _____

1. _____

2. _____

3. _____

4. _____

5. _____

Skeleton Story Writing -- Write your skeleton story here.

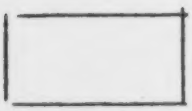
LAP 3

_____	1. astonished	A.	impatient or restless
_____	2. hostile	B.	to turn aside
_____	3. coax	C.	amazed or surprised
_____	4. perilous	D.	friendly, pleasant, and agreeable
_____	5. divert	E.	scared or dazed
_____	6. genial	F.	to gently persuade
_____	7. shudder	G.	to search or examine something
_____	8. petrified	H.	to be mean and unfriendly
_____	9. fidgety	I.	to shiver and tremble from fear
_____	10. investigate	J.	risky or dangerous

Time it took to finish:

_____ minutes

_____ seconds



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APPENDIX D

TEACHER'S GUIDE

TEACHER INSTRUCTIONS

VOCABULARY AND WRITING STUDY

4th and 6th grades

Ms. Witte and Mr. Miller

South Hamilton Comm. School

Jewell, Iowa 50130

Teacher Instructions

Day 1

A. Word Introduction

Note: During this word introduction, divide the blackboard into three sections so that each set of responses can be placed on a separate section of the blackboard. See diagram below.

fidgety	petrified astonished	shudder investigate

Tell the students that this week they're going to learn some new words that they can use when writing about exploring something new and mysterious.

Pass out the booklets. Tell the students that they will be using their booklets throughout the vocabulary unit.

Elicit responses to this question:
"When you begin to explore something new and mysterious, how do you feel?"

Write some of the responses on the first section of the board.

Find a word on the board that means impatient or restless and write the word fidgety by it and circle it.
(If no word represents impatience or restlessness, ask the students if they sometimes feel impatient or restless before beginning to explore something new and mysterious. Explain that fidgety can be used to express this feeling of impatience.)

Then do the following:

1. Read fidgety aloud.
2. Ask the students to pronounce the word after you.
3. Ask the students to spell the word.
4. Ask the students to find fidgety on the first page of their booklets.
5. Ask a strong reader to read the fidgety definition aloud.
6. Ask the students to write fidgety on the blank line next to the word on their page.

Ask the students:
"Can you think of a time when you felt fidgety?"

Offer your own response to this question, too.

Then say:
"This word is one word to express our feelings when we begin to explore something new and mysterious. Now, how do you feel when you find or discover something strange or different?"

Again, elicit responses to this question and write the words on the second section of the board.

Find a word that means scared and write the word petrified by it and circle it.
(If no word represents being greatly scared, ask the students if they have ever felt greatly scared when discovering something strange or different. Explain that petrified can be used to express the feeling of being very scared.)

Repeat steps 1-6.

Then, find a word that means amazed or surprised and write the word astonished by it and circle it.
(If no word represents being greatly surprised, ask the students if they have ever felt greatly surprised when discovering something strange or different. Explain that astonished can be used to express the feeling of being very surprised.)

Repeat steps 1-6.

Ask the students:
"Can you think of a time when you found something strange and you felt petrified? ... When you felt astonished?"

Again, have the students share some responses, and also offer your own responses.

Then say:
"These two words tell about our feelings when we find something strange or different. Now, when you find something strange or different, what do you do?"

Elicit responses to this question and write them on the third section of the board.

Find a word that means to tremble or shiver with fear and write the word shudder by it.
(If no word represents trembling or shivering with fear, ask the students if they have ever trembled or shivered when finding something strange or different. Explain that shudder can be used to describe the action of trembling or shivering from fear.)

Repeat steps 1-6.

Find a word that means to search or examine and write the word investigate by it.
(If no word represents searching or examining something, ask the students if they have ever felt brave enough to examine something strange or different. Explain that investigate can be used to describe the action of searching or examining something.)

Repeat steps 1-6.

B. Old + New = Situation Activity

Say the following:
"I want to find out how you feel about situations which can be described by using these words. I'm going to say 2 words. The first is a word you know and the second word is a new vocabulary word. If you think that the situation described by the two words is something you would like, then say, 'alright'. If the situation described by the 2 words is something you would not like, then say, 'no way!'"

"Try to make your answers all come out at the same time. I realize that some of you might say 'alright' and others may say 'no way' about the same situation. That's acceptable as long as you have a reason for your answer."

"Let's start now."

1. "ghost : shudder"

   Pick a student and ask, "Why did you say alright/no way ?" Try to get the student to say the word shudder in his or her answer, such as, "I said 'no way!' because I would be scared or a ghost. I would shudder."

   Make sure the students try to justify each response given. Keep encouraging the students to use the new vocabulary words when justifying their answers to each of the following.

2. "present : astonished"

3. "doctor : fidgety"

4. "murder : investigate"

5. "tornado : petrified"

D. Sentence Completion

After each new word on the students' sheet is the beginning of a hand written sentence. Explain that the students are to think of an ending to the sentence. The ending should show that they know what the new word in the sentence means. Students should raise their hands when they think of an ending. Follow the following steps:

1. Review the definition for fidgety.

2. Read the beginning of the sentence.

3. Call on students for their endings. When you get a good sentence ending, write it on the board.

4. Have the students copy the sentence ending onto the appropriate lines on their sheets.

Follow these same steps for petrified, astonished, shudder, and investigate.

E. Writing Activity

Have each student pick one of the new words and write a new sentence that uses this word. Have them write this sentence on p. 2 of their booklets. Give a few oral examples for the students.

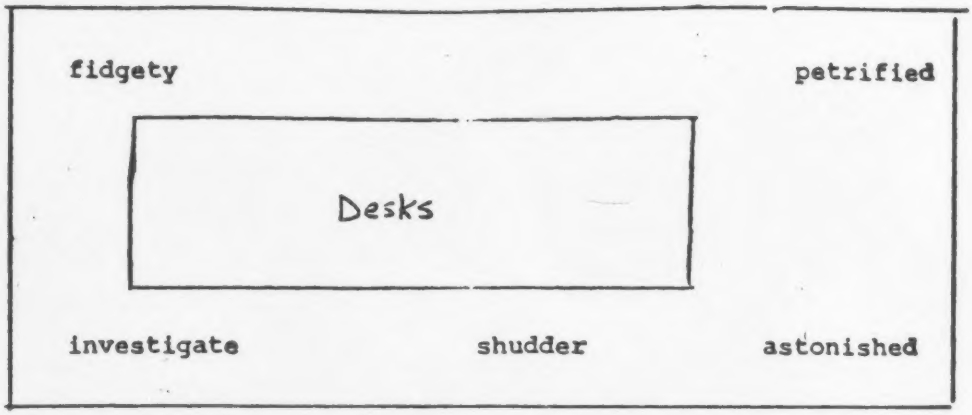
"I was fidgety because I wanted to go outside."

"I began to shudder when I saw the door open by itself."

" I was astonished when John gave me a Valentine!"

(If students have trouble composing a sentence, have them think back to the original question, "When you begin to explore something, how do you feel?" and have them think of a story they could be in and the sentences it would contain.)

After the students have individually written their sentences, have them go to different parts of the room to meet with those students who also chose their particular word. The room / groups could be arranged as follows.



The students should then share their sentences with the other students who also chose their particular word. Have the students in the groups decide if the sentences are correct or not. When the group cannot come to a decision as to the correct or incorrect use of a word, they should then ask the teacher or observer for his or her opinion.

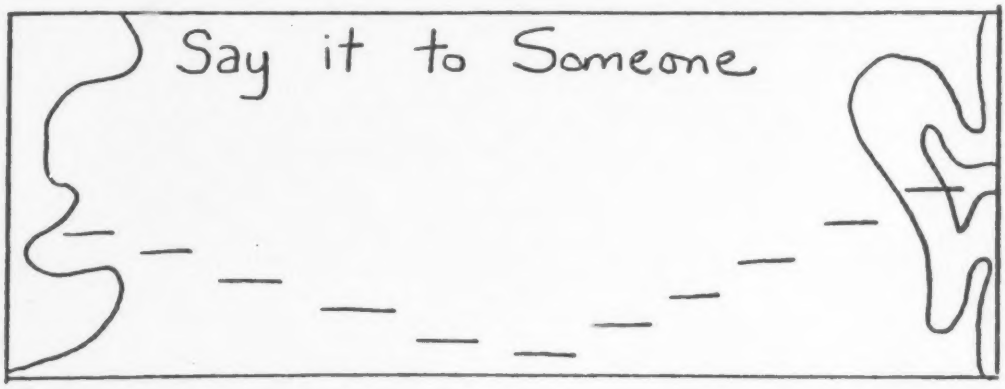
The teacher and observer should circulate among the groups to see if the words are being used correctly.

The students should then group back together in one large group. Ask why they chose their particular words. Have the students share sentences with the large group if they want to.

Also, note which words are readily used and which are not.

F. Say it to Someone

Explain that all of the new words are on the "SAY IT TO SOMEONE" chart.



If a student, outside of class, sees one of the new words, hears one of the new words, or uses one of the new words in talking or in writing, that student's name will be put on the chart above the particular word used. At the end of the week the student who has used the new words the greatest number of times will receive a prize.

The students have to prove that they have seen, heard, or used the word by bringing the teacher or observer the sentence in which the word occurred.

At the end of Day 2 the class will check to see which words have been used outside of class.

G. Secret Word of the Day

Explain that the teacher and observer have selected one of the new words as a "secret" word. If students think they know the word, they must whisper it in either the teacher's ear or the observer's ear outside of language arts class. If it is the right word, the teacher or observer will ask the student to use it in a sentence. If it is correctly used, the prize of the day can be won. (Vocabulary booklets cannot be used when the student composes a sentence for the teacher or observer.)

The prize of the day is _____.

The secret word is _____.

Teacher Instructions

Day 2

A. New Word Review.

Ask the students to answer the following questions using the new words learned if possible.

1. "When you begin to explore something, how can you feel?"

   When the students respond with fidgety, ask them for a definition again.

   (In this section, accept other legitimate responses, but reinforce this as a review of the new words that can be used in these cases or situations.)

   Have the students close their eyes and spell fidgety in their minds.

   Keeping their eyes closed, have the students then write fidgety (using their hands) on their desks.

2. "When you find something new and mysterious, how can you feel?"

   (Follow this question with the same sequence as the above, using the words astonished and petrified.)

3. "When you find something new and mysterious, what can you do?"

   (Again, follow the above sequence, using the words, investigate and shudder.)

Again, emphasize that these words are not the only words that can be used, but that these are a few possibilities which we are learning to use.

B. Ready, Set, Go -- Lap 1

Explain that the students will be working with a partner to time each other to see how fast they can recognize what each new vocabulary word means.

Have the students turn to the page in their booklets called Day 2 -- Lap 1.

If the students don't understand what a lap is, explain that it means once around something, such as a race course or track. Explain that each time a student does one lap, he or she is to try and improve his or her performance. Explain that it is also important to be correct as well as quick.

Explain that one student will turn to lap 1 and try to quickly draw lines from each word to its definition. The other student will time how long it takes him or her to do this. The student should write his or her completion time in the space provided on lap 1.

Then the students will reverse roles and the partner will do lap 1 while the other student times. See diagram below:

Lap 1, first time: A = runner B = timer

Lap 1, second time: A = timer B = runner

Read the following rhyme:

The Sad, Sad Story of Fastdraw Badshot

Fastdraw Badshot -- the fastest gun in the West.
Shooting before you knew it was what he did best.
He had a bit of a problem, though, and it was this:
No matter what he quickly shot at, he always missed!

"You'll never be a hero, just because you are fast,"
The people told Badshot, "You just won't last."

So let this be a lesson with Ready, Set, Go --
There are two things to remember, I want you to know.

Remind all your friends, every cowhand in sight --
One: Do the lap quickly! But Two: Do it right!

(taken from the Beck et al. unit and revised)

If time allows, have the students then check their laps with the definitions given on Day 1. Check to see who had the best correct time. Explain that there will be another lap on the words learned today.

C. Word Introduction

Note: Again, during this word introduction, divide the blackboard into two sections so that each set of responses can be placed on a separate section of the blackboard. See diagram below.

genial hostile perilous	divert 96 coax

Follow the same format for the word introduction section as used on Day 1.

Elicit responses to this question:
"Imagine that you have now found something mysterious. What words can you use to describe it?"

Write the responses on the first section of the board.

Find a word that means friendly and write the word genial by it and circle it.
(If no word represents friendliness, pose questions such as, "How would you describe something mysterious that was nice to you?" Explain that genial can be used to describe something or someone that is friendly.)

Then do the following:

1. Read genial aloud.
2. Ask the students to pronounce the word after you.
3. Ask the students to spell the word.
4. Ask the students to find genial on the first page of the Day 2 sheets in their vocabulary booklets.
5. Ask a strong reader to read the genial definition aloud.
6. Ask the students to write genial on the blank line next to the word on their page.

Find a word that means unfriendly and write the word hostile by it and circle it.
(If no word represents unfriendliness, ask the students, "How would you describe something mysterious that was not nice to you?" Then explain that hostile can be used to describe something not friendly.)

Repeat steps 1-6 above using the word hostile.

Find a word that means dangerous and write the word perilous by it and circle it.
(If no word represents danger, ask the students, "Would your being near something mysterious be dangerous?" Explain that perilous can be used to describe something dangerous.)

Repeat steps 1-6 above.

Ask the students:
"Now that you have described this new and mysterious thing, what are you going to do with it?"

Again, elicit responses and write them on the second section of the board.

Find a word that means to entertain or change its attention and write the word divert by it and circle it.
(If no word represents divert, ask the students, "If you wanted to get away from something strange and mysterious, would you try and change its attention?" Explain that divert means to entertain or change something or someone's attention.)

Repeat steps 1-6 above.

Find a word that means to gently gain its good will, or to persuade and write the word coax by it and circle it.
(If no word represents coax, ask the students, "If you wanted to make friends with this new thing, would you try to gain its good will?" Explain that coax means to gently gain something or someone's good will.)

D. Word Association (Omit this activity if time is short.)

Follow the same basic format as used for Day 1.

Say the following:
"Now, again look at the new words on the pages and their definitions. I will say a word or group of words. You think of the first new vocabulary word that comes to your mind. Raise your hand and I might call on you to tell me the word."

Give the following associations, one at a time.

1. "Mountain climbing"

   (student will likely say perilous)

2. "Best friend"

   (student will likely say genial)

3. "Enemy"

   (student will likely say hostile)

4. "Giving a dog candy so that it will do a trick"

   (student will likely say coax)

5. "Telling your mother about how you cleaned your room as she reads your report card"

   (student will likely say divert)

If the students do not respond with a particular vocabulary word, accept any legitimate responses that occur, encouraging them to find a vocabulary word that can be used.

E. Sentence Completion.

Explain that the students are again going to think of endings to the sentences given after each new word. The ending should show that they know what the new word in the sentence means. Students should raise their hands when they think of an ending. Follow the same steps as used on Day 1.

1. Review the definition.
2. Read the beginning of the sentence.
3. Call on students for their endings. When you get a good sentence ending, write it on the board.
4. Have the students copy the sentence ending onto the appropriate lines on their sheets.

Follow these same steps for genial, hostile, perilous, divert, and coax.

F. Thumbs Up / Thumbs Down

Say the following:
"I will ask you a question that includes one of the vocabulary words from either yesterday's words or today's words. Answer the question with a Yes or No by putting your thumbs up for Yes or your thumbs down for No."

"Be ready to explain WHY you chose your particular answer."

1. Would a giant shudder when seeing a mouse?
2. Would hiking along a steep cliff be perilous?
3. Would you be astonished to find E.T. in your closet?
4. Are old people usually fidgety?
5. When you want to shoot a basket, do you try to divert the guard's attention?
6. Would you coax a teacher into giving you more homework?
7. If you saw a ghost, would you be petrified?
8. Would you shake hands with a hostile football player?
9. If you heard a strange noise late at night, would you investigate it?
10. Would you ignore a genial person?

G. Mini-Stories

Have a student(s) write all 10 vocabulary words on the board in large letters.

Arrange students in cooperating groups of 4-5 (or 3-4 if that is easier) students. Instruct the students to compose a mini-story that uses 4 or 5 vocabulary words.

Share one story example with them:

> John was fidgety because he wanted to go to the basketball game. John couldn't divert his father's attention from the T.V. so he decided to coax his mother into taking him to the game. The boy was astonished when his mother told him that their whole family was going to go to the game!

Each group should choose one person from their group to read their mini-story to the entire class. As each story is read, one student will place a mark by each word each time that particular word is used.

Look at the number of times each word was used. Ask the students if some words were used more than others. Ask the students to offer suggestions as to why they chose some words and not others. If one or more words are never used, offer suggestions as to how that word or those words could have been used.

H. Say it to Someone

Explain that the last 5 new words are on the "SAY IT TO SOMEONE" chart. (Put up the last five words on the chart before class begins.)

Again, state that if a student, outside of class, sees one of the words, hears one of the new words, or uses one of the new words in talking or in writing, that student's name will be put on the chart above the particular word used.

If time allows, at this time have the students who have proved that they have used a word outside of class put their names on the small pieces of paper and tape the papers above the particular word that they used.

f. Secret Word of the Day

Explain that the teacher and observer have again selected one of the words as a "secret" word. If students think they know the word, they must whisper it in either the teacher's ear or the observer's ear outside of language arts class. If it is the right word, the teacher or observer will ask the student to use the word in a sentence. If the word is used correctly, the prize of the day can be won.

The prize of the day is _____.

The secret word is _____.

Teacher Instructions

Day 3

A. New Word Review

Ask the students to answer the following questions using the new words learned if possible.

1. "What are the words we learned that can be used to describe a mysterious thing or place?"

   (When the students respond with genial, hostile, and perilous, ask for their definitions again.)

   Have the students close their eyes and spell the words in their minds.

   Keeping their eyes closed, have the students then write the words (using their hands) on their desks.

2. "What are the words we learned that can be used to describe what you could do with the strange thing?"

   (Follow this question with the same sequence as above, using the words divert and coax.)

Again, emphasize that these words are not the only words that can be used, but that these are a few possibilities which we are learning to use.

B. Lap 2

Explain that the students will be working again with a partner to time each other to see how fast they can recognize what each of the Day 2 vocabulary words mean.

Have the students turn to the page in their booklets called Day 3 -- Lap 2.

Again, if time allows, have the students check their laps with the definitions given on Day 2. Check to see who had the best correct time. Explain that at the end of today there will be a lap on all of the words.

C. Oral Sentence Completion Activity

Tell the students that you will say some sentences. One of the final words in each sentence will be left out. If they think they know which new word fits in the sentence, they are to write the word in their booklet and then raise their hands.

When a response is given, ask the student to tell how he or she knew the right word. Encourage students to restate or rephrase definitions. The students can look at the words and their definitions in their booklets.

Tell the students to first look at the words they learned on Day 1.

1. If you decide to search or examine something strange, you have decided to _____.

2. If you are in a tight place and want to move around, you might become _____.

3. If you shiver and tremble when you see a ghost you are _____.

4. If you are amazed and surprised at seeing something strange and new, you are _____.

5. If you are so scared that you freeze in your tracks, you are _____.

Answers to the above:
1. investigate 2. fidgety 3. shuddering 4. astonished 5. petrified

Now, tell the students to turn to the words learned on Day 2.

1. If you decide to take a risk and make friends with a robber, you are doing something _____.

2. If you are very pleasant and friendly, you are _____.

3. If you gently persuade your parents to let you have a new bike, you are _____ them.

4. If you holler and scream at another person, you are being _____.

5. If you try to change someone or something's attention, you try to _____ them.

Answers to the above:
1. perilous 2. genial 3. coaxing 4. hostile 5. divert

Emphasize those words which are spelled differently than in the student's booklet, for example, "coaxing", "shuddering".

D. Skeleton Story Writing

Split up the students into cooperating groups of 4-5 students each. Each group is to compose a "skeleton" story using as many of the vocabulary words as possible. (A skeleton story is one where the details are left out and only the main points are stated.)

Each group should compose at least one skeleton story. All members of the group should write the story in their booklets (on p. 7). If the group has time to think of other skeleton stories, they should be encouraged to write these stories on the back of p. 7 in their booklets.

When each group is finished composing and writing, they should choose one person (reader) that will read the story to the entire class and another person (judge) to be on a judge's panel to judge the stories.

The groups should come back together to form the entire class.

The judges should sit or stand in the back of the room.

The readers should read the stories while the panel judges.

After the stories have been read, the panel should leave the room for 2-3 minutes with the observer. During this time they will decide which story is best.

During this time the rest of the class may proceed on to the Say It To Someone activity, putting any names above the words on the chart.

The panel should return to the room and disclose their decision, including the reasons <u>why</u> they decided on a particular story as being the "best".

E. Lap 3

Lap 3 should be done in the same way as previous laps.

F. Secret Word of the Day

Repeat the instructions as given on Days 1 and 2.

The prize of the day is _____.

The secret word of the day is _____.

G. Say it to Someone

Explain that this activity will continue. If a student, outside of class, sees one of the new words, hears one of the new words, or uses one of the new words in talking or in writing, that student's name is put on the chart above that particular word.

Again, the students have to prove that they have seen, heard, or used the word by bringing the teacher or observer the sentence in which the word occurred.

Note which words have been used the most so far on the chart.

Teacher Instructions

Day 4

A. Pantomime

Show the differences between the words by having the students pantomime each word.

First, practice as an entire group on one or two of the words. For example, pantomime the words shudder and investigate.

Then, secretly give a word to pairs of students. (You could have them draw the words from a hat.) Have the pairs discuss the word quietly and then pantomime the word while the rest of the class guesses what the word is.

At the end of the activity, discuss why some words were easier to pantomime than others.

B. Multiple-Choice Mastery Test

Tell the students that today they will take a test on their vocabulary words.

Pass out the test.

Give the following directions:

> "I will read the word next to each number. One of the answers beside each letter tells you what the word means. I will read all of the answers to you. Pick the best answer. Write the letter of the correct answer in the blank in front of the vocabulary word. After I have read all of the questions you may go back and reread them if you want to. When you are finished, turn your paper over on your desk."

C. Preparation for the Writing Task

Explain that tomorrow the students will be asked to write a story in which they will have an opportunity to use these new vocabulary words. Encourage the students to be thinking of ways that they could use these words in a story similar to their skeleton story or in a new story.

D. Say it to Someone

This activity will continue as previously stated.

E. Secret Word of the Day

It is the teacher's choice whether or not this activity will be used on Day 4.

Teacher Instructions

Day 5

A. Writing Task

Explain that the students will have a writing task and will be given the entire period to work on the writing task. The students should have their vocabulary booklets on their desks to refer to during the writing task.

Explain that these papers will not be graded according to spelling or punctuation errors, but rather on content. They are to be as creative as possible.

Give the students the entire period to write. Circulate about the room to answer any questions that might occur. If a student finishes early, encourage that student to reread his or her paper to see if it really says what he or she wants it to say.

At the end of the period collect the papers.

B. Say it to Someone

The grand prize will be given to the person who has used the new words the greatest number of times.

C. Interviews

A randomly chosen group of students from the experimental groups will be asked to meet individually with the observer to discuss their views toward the vocabulary unit.

Day 6

A. Questionnaire

Questionnaires will be passed out to the students.

Read the items out loud to the students, pausing after each item so that they can answer it.

These questionnaires should then be passed in without names at the top.

Feel free to answer any questions that the students have concerning the questionnaire items.

APPENDIX E

POST-TREATMENT WRITING TASK

The following was read to all students in the experimental and control groups before an entire class period was devoted to writing their narratives.

> What would you like to explore? Imagine that you are exploring something new and mysterious. What happens? How do you begin to explore? What do you find? Is what you find friendly or unfriendly? What do you do with this new person or thing? How do you feel?
>
> You may write for this entire period.

APPENDIX F

ATTITUDE INVENTORY

SD = Strongly Disagree, D = Disagree, U = Undecided

A = Agree, SA = Strongly Agree

	SD	D	U	A	SA
1. The instruction helped me learn how to use the vocabulary words in a story or sentences.	___	___	___	___	___
2. Thinking about situations that used the words did not help me to learn the words.	___	___	___	___	___
3. Completing sentences in the student booklet helped me to understand the words.	___	___	___	___	___
4. Writing the words in other sentences helped me to learn the words.	___	___	___	___	___
5. I tried to say the new words to someone outside of class.	___	___	___	___	___
6. I enjoyed trying to guess and use the secret word of the day.	___	___	___	___	___
7. I did not enjoy writing a mini-story with other students.	___	___	___	___	___
8. I enjoyed pantomiming the words.	___	___	___	___	___
9. The laps did not help me to learn the words.	___	___	___	___	___
10. I tried to use some of the vocabulary words in the final writing task.	___	___	___	___	___
11. I did not enjoy the vocabulary unit.	___	___	___	___	___
12. The vocabulary unit was too long.	___	___	___	___	___
13. I feel that I am able to use the words I learned in speaking and writing.	___	___	___	___	___

APPENDIX G

OUTLINE OF INSTRUCTIONAL UNIT

The vocabulary instruction consisted of four days of activities designed to teach the semantically-related set of ten words. The unit was as follows:

Day 1

A. Word Introduction (first five words)

B. Word Association Activity (two-word pairs -- one well-known work plus a new vocabulary word -- students react to the situation created by the two words)

C. Sentence Completion

D. Writing Activity (student chooses one word and writes a new sentence using the word)

E. Say it to Someone

F. Secret Word of the Day (students could have one guess -- wrote their guess on a piece of paper and put it in a box -- was checked daily -- winners had to use the word in a sentence to receive their prizes)

Day 2

A. New Word Review

B. Ready, Set, Go -- Lap 1 (rather than compress four laps into one day, this was modified to one lap on Day 2 involving the first five words, and two laps on Day 3 -- the first involving the last five words and the second involving all ten words)

C. Word Introduction (last five words)

D. Word Association (students were told a phrase and responded with the vocabulary word the phrase elicited)

E. Sentence Completion

F. Thumbs up / Thumbs down

G. Mini-stories (the students were arranged in groups of four -- they listened to a mini-story example and composed "group" mini-stories that tried to use several of the new vocabulary words --the stories were shared with the class and a tally was kept to see which words were used more than others and why)

H. Say it to Someone

I. Secret Word of the Day

Day 3

A. New Word Review

B. Lap 2 (on the last five words)

C. Oral / Written Activity (the last word in a sentence was omitted -- students chose a vocabulary word that correctly finished the sentence)

D. Skeleton Story Writing (the students were again arranged in groups of four -- they composed skeleton stories that consisted of placing the major points of a plot on the backbone of a skeleton -- vocabulary words that could possibly be used in the story were placed on the arms and legs of the skeleton -- each group chose a storyteller and a judge -- stories were given and judged by the students)

E. Lap 3 (on all ten words)

F. Say it to Someone

G. Secret Word of the Day

Day 4

A. Pantomime

B. Multiple-choice 10-item Vocabulary Word Posttest (the 10 items were identical to those on the pretest and were rearranged -- papers were exchanged and corrected by the students and rechecked by the experimenter)

C. Preparation for the Writing Task
(students were told that on the following day they would be asked to write a new story)

D. Say it to Someone

E. Secret Word of the Day

Day 5

A. Writing Task (this was identical to the post-treatment writing task given in the pilot study)

B. Say it to Someone (the grand prize was awarded)

C. Secret Word of the Day

Day 6

A. Questionnaire

This consisted of 13 statements comprising an attitude inventory where students were asked to respond to the statements with one of five possible responses: strongly disagree, disagree, undecided, agree, and strongly agree. The statements were again designed to gather students' responses to the treatment. Eight positively and five negatively phrased statements were randomly distributed. The beginning and final three statements dealt with an overall feeling toward the unit, and the middle statements dealt with reactions to specific parts of the instructional unit.

APPENDIX H

ANALYTIC SCORING SCALE AND SCORING SHEET

Analytic Scale -- Descriptors

1. Sequence of Events / Structure

High = The order of events is always clear, and the story flows in an interesting, well-organized manner.

Middle = Although there is an attempt at proceeding from beginning to end, a few times the order of events is not clear.

Low = The order of events is not at all clear, and the story isn't well organized.

2. Wording

High = Words are used in a creative, colorful, and interesting way.

Middle = A few words are used in a creative and interesting way.

Low = Common, ordinary words are used.

3. Substance / Content

High = The student fully develops the story. The paper contains a good deal of content and details.

Middle = The student fails to fully develop the story. The content is not as full as it could be. Some details are given.

Low = The student does not develop the story. There is little content. Very little detail is given.

4. Entertainment

High = The story was very entertaining and was a pleasure to read.

Middle = The story was somewhat entertaining and somewhat enjoyable.

Low = The story was neither entertaining nor enjoyable.

Analytic Scale

Student Number _____

Descriptors	Low		Middle		High
1. Sequence of Events Structure	2	4	6	8	10
2. Wording	2	4	6	8	10
3. Substance Content	2	4	6	8	10
4. Entertainment	2	4	6	8	10

Total _____

Analytic Scale

Student Number _____

Descriptors	Low		Middle		High
1. Sequence of Events Structure	2	4	6	8	10
2. Wording	2	4	6	8	10
3. Substance Content	2	4	6	8	10
4. Entertainment	2	4	6	8	10

Total _____